



State of New Jersey
Department of Environmental Protection and Energy
Division of Responsible Party Site Remediation

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CERTIFIED MAIL
RETURN RECEIPT REQUESTED
NO. P642608650

Cristopher Anderson, Manager
Environmental Affairs
L.E. Carpenter and Company
1301 East Ninth Street, Suite 3600
Cleveland, OH 44114

18 MAR 1992

Re: L.E. Carpenter Site
Wharton Borough, Morris County
Baseline Risk Assessment

Dear Mr. Anderson:

The New Jersey Department of Environmental Protection and Energy (hereinafter "the Department") and the United States Environmental Protection Agency (hereinafter "USEPA") have reviewed the Baseline Risk Assessment prepared by Weston dated February 8, 1992, in its fourth revision, and have the following comments. The Department hereby approves the February 8, 1992 revision of the Risk Assessment (hereinafter "Report") provided that the following comments are addressed to the satisfaction of the Department and included in the Administrative Record.

I. *Section 2, Tables 2-1 through 2-6*

The Upper 95% Confidence Limit for the concentrations of substances in various media are tabulated and presented in Tables 2-1 through 2-6, however, the Report does not define how the confidence limit was calculated. EPA guidance (see page 6-19 of Risk Assessment Guidance for Superfund, Volume I, December 1989, EPA/540/1-89/002) suggests that the Upper 95% Confidence Limit for the arithmetic mean be utilized in risk assessments. An Upper 95% Confidence Limit for a randomly chosen data point or for the geometric mean can also be calculated. Recognizing that there are different approaches to defining the Upper 95% Confidence Limit, an explanation of how these numbers were arrived at is requested.



II. *5.3.2.2. Non Carcinogenic Risk*

Unfortunately, a comment concerning the inappropriate use of the hazard index in the report was never communicated to L.E. Carpenter for revision. *For the record*, the hazard index discussion in terms of a range "greater than 10 and greater than 100" is not appropriate for discussing non-carcinogenic adverse health effects. However, this discussion does not change the final conclusion of the report.

III. *5.4.2.3 Possible Non-site Related Contamination, pg 5-24*

The Report states that the nature of the contaminants detected in the off-site monitoring wells on the Air Products property is suspect. The report further states that it is inappropriate to include these contaminants in calculating potential risks posed by the L.E. Carpenter site for a number of specific reasons, all of which have been disputed by the Department in previous comments. Until the Department reaches its final determination regarding the hydrogeological conditions (i.e. direction of shallow groundwater and influence of the drainage ditch) and source of contaminants on Air Products property, the issue is not considered closed.

IV. *5.4.3.2 Qualitative Assessment of Risks from Exposure to Lead*

The Report states (pg 5-34, para 5) that the "lead was found in sediments at a geometric mean concentration of 55 mg/kg..." The reference to "sediments in the above statement is incorrect and must be replaced with the word "soils". Also, a maximum concentration of lead in deep ground water was reported in the text as being 4.8 mg/L (para.4), whereas in Table 2.3 the maximum concentration for lead is 4.8E-03 mg/L. Obviously, the concentration reported in the text is incorrect and should be identified as such.

Previous correspondence from WESTON (see December 17, 1991 letter to the Department from WESTON) and the Report document that there are areas on-site with elevated levels of lead which will be considered in the Feasibility Study. If L.E. Carpenter recognizes that lead will be remediated to the appropriate levels as determined by the Department, another revision to the Report will not be required.

V. *5.4.3.3 Land Usage*

There are numerous citations in chapter 5.4.3.3 as well as other references in the document regarding the remediation level and property land use. For example, page 5-36, paragraph 2, states "It should be noted that the property will be used for commercial purposes, and therefore, residential exposure in this model does not represent the intended use of the property." This kind of language is inappropriate for any baseline risk assessment.

Future land use and remediation goals are not something that is determined in the baseline risk assessment. The goal of the baseline risk assessment is to provide a framework for developing the risk information necessary to assist decision making at remedial sites. The Department may restrict future land use if the site is not remediated to the proposed soil standards.

VI. *6.7.3 Conclusions*

The Ecological Risk Assessment has demonstrated that species present in the Rockaway River adjacent to the L.E. Carpenter Site are likely to have been impacted by elevated levels of contaminants detected in the river sediments. As a result, L.E. Carpenter must further evaluate the impact to the freshwater ecosystem by proposing additional studies to determine conclusively whether adverse ecological effects have occurred and if so, to what degree.

In order too fulfill the NCP requirments for an ecological site wide risk assessment a toxicity study of macro invertebrates inhabiting the sediments of the Rockaway River adjacent to the site is required. L.E. Carpenter must submit a work plan to the Department describing the methods and procedures which will be utilized in evaluation of benthic macro invertebrates. The work plan must include quality control and quality assurance procedures, selection of sampling stations, sampling methods, sample processing, data evaluation and discussion of selected species. The Department may be contacted for guidance on specific methods, species selection and sampling locations. The toxicity study may be attached as an addendum to the Report or as part of the Final Feasibility Study.

In conclusion, another revision is not required. The Report demonstrates an unacceptable carcinogenic risk for the residential soil pathway scenario of 1 E-03 for the RME, (with DEHP contributing to the majority of risk) and non-carcinogenic risk from soils of 8.3, which is above the threshold of unity. Ground water also presents an unacceptable total lifetime carcinogenic risk greater than 1 E-04 indicating that the site poses an unacceptable risk and requires remediation.

If you have any questions regarding the Department comments of the Report, please feel free to call me at (609) 633-1455.

Sincerely,



Christina H. Purcell, Case Manager
Bureau of Federal Case Management

Baseline Risk Assessment
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cc: Martin O'Neill
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